

ABSTRACT OF THE DISCLOSURE

An arc welding monitor designed to aid in the instruction of electric arc welding, provide data that can be used for inspection and quality assurance of individual welds, and provide an archive record of the arc welding process for future reference and analysis.

A sensor is used to unobtrusively measure the welding arc parameters. The measurements are transmitted in real-time from the welding station to an instructor/supervisor workstation via a radio frequency data link. The received data is graphically displayed in near-real-time on the instructor/supervisor workstation computer screen. The data can be analyzed by standard statistical analysis tools to qualitatively grade the weld, be stored on computer disk storage media for later retrieval and analysis, or printed in a graphic display. Interpretation of the graphical display and statistical analysis is used to critique and instruct welder operator technique or to indicate process flaws that warrant further inspection of suspected welds.